

EX

Notice of Allowability	Application No.	Applicant(s)	
	10/661,486	KIM, SANG HYUN	
	Examiner	Art Unit	
	Laura M. Schillinger	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to 9/27/05.
- 2. ☒ The allowed claim(s) is/are 1-3,5-7.
- 3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 - 1. ☒ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Cancel claims 4 and 8-23.

Amend claim 1 as follows:

1. A crystallization method of an amorphous semiconductor layer comprising:
providing an amorphous semiconductor layer having a first thickness;
crystallizing the amorphous semiconductor layer in a first direction;
partially etching the crystallized semiconductor layer to a second thickness less than the first thickness; and
crystallizing the partially etched semiconductor layer in a second direction, wherein the crystallizing is performed by sequential lateral solidification.

Allowable Subject Matter

Claims 1-3, 5-7 are allowed.

The following is an examiner's statement of reasons for allowance:

The amended claim language overcame the Examiner's prior 112 and 102 rejections.

In reference to claim 1, Chang (US 2004/0248345 A1) teaches a crystallization method of an amorphous semiconductor layer comprising:

providing an amorphous semiconductor layer having a first thickness (Fig.3A (304));

crystallizing the amorphous semiconductor layer (Fig.3B (306));

partially etching the crystallized semiconductor layer to a second thickness less than the first thickness (Fig.3D (314)); and

crystallizing the partially etched semiconductor layer (Fig.3F (318)).

However, Chang fails to teach wherein the second crystallization step is carried out in a second direction.

Song et al (WO 03/052833 A1) teaches a similar method wherein the laser crystallization technique is a sequential lateral solidification (SLS) method wherein the same region is irradiated twice with a laser beam. The crystallization is a two step process with the first step carried out in a lateral direction and the second step carried out in a horizontal direction. However Song still fails to specify that after the first crystallization in a first direction, the crystallized layer undergoes a partial etch treatment. Rather, after both steps are performed, a resulting protrusion is etched with no subsequent crystallization in a second direction as required by the claim language. This method is also similar to Ohtani et al ('632) which also has similar deficiencies. The Examiner could find no motivation to modify any of the references to anticipate Applicant's claim language. Consequently, prior art fails to teach Applicant's claimed limitations in combination and claims 1-3,5-7 are allowed..

Art Unit: 2813

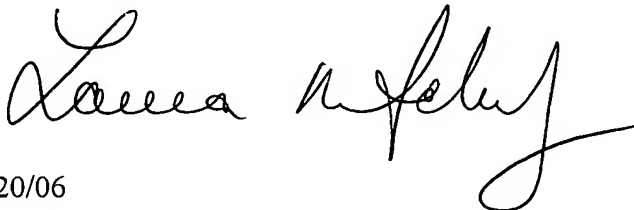
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Laura M Schillinger
Primary Examiner
Art Unit 2813

01/20/06